CHENBRO

User's Manual

SK33502

3-to-5 SATA HDD

Storage Kit

Version B0

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Web Support

Detail information of our products is in our website. You can find technical updates, installation guides, FAQs, Technical specifications and more. Our web address is: www.chenbro.com.

Email Support

You can also fill out the technical support from at our Technical Support page. You technical issue inquiries will be sent directly to our support professionals.

Phone Support

You can also contact CHENBRO HQ or branch office for immediate support; their contact Information is as following:

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Revision History

Date	Modifications
Dec. / 9 / 2008	● First Release

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Safety Information

- **Read the installation instructions before connecting SK33502 to the power source.**
- **Only trained and qualified personnel should be allowed to install, replace or service this equipment.**
- **Never install this product in a wet environment.**
- **Position system cables and power cables carefully; route system cable and the power cable and plug so that they cannot be stepped on or tripped over. Be sure that nothing rests on your system components' cables or power cable.**

Conventions Used in this Manual

The following conventions are used in this manual.

	Note Icon: **Provides more information on the current topic.**

	Important Icon: **Provides important information on the current topic that must not be overlooked.**

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Getting Start with the SK33502 Storage Kit

Thank you for purchasing SK33502! This section covers unpacking and identifying components.

Unpacking and Checking the Contents

The complete SK33502 package includes the following items:

Item Description	Quantity
SK33502 Storage Cage	1
Hot-swap 3.5" Hard Disk Drive (HDD) Tray	5
SAS / SATA-II Cable	5
HDD failure / activity signal cable 5P to 5P	1
USB Cable, 750mm	1
Screw: #6-32 (6mm) for tray and HDD assembling	20
Screw: M3 (6mm) for Storage Cage and chassis assembling	12

	The 5P to 4P HDD failure / activity cable is available for using on HDD failure or activity LED. Refer to the RAID card user manual for the detailed application and connection information.

Technical Specifications

Occupancy	3 x 5.25" Drive Bays
Capacity	5 x SATA-I, II or SAS Hot-swap HDDs
Cooling Subsystem	1 x 80mm (T32mm) Exhaust Fan
System Monitoring	● Fan Fail Detection LED and Alarm ● Overheat LED and Alarm ● HDD Failure LED and Alarm
Front Access	Two USB ports on the front panel
Dimensions (WxHxD)	146 x 127.3 x 218.2 (mm) 5.75 x 5.01 x 8.59 (inch)
Weight (Fan included)	2.2 kg

Compatible CHENBRO Chassis

- **RM31300 / RM41100 / RM41500 / RM42200**
- **SR105 / SR107 / SR108 / SR209**

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Introduction

The CHENBRO SK33502 can house five 3.5" HDDs in a three 5.25" bays converter (Depth of 9.5" recommended). The ability for conversion allows existing servers to perform the maximum HDD density while keeping the flexibility. In all, SK33502 is the best solution as value added feature and performance.

Functional Specification

General

- **Support SAS and SATA-II (3Gb/s)**
- **Compatible with 3.5" SATA-I, SATA-II and SAS HDD**
- **Support inrush current control for drive hot-swapping**
- **LED indicate activity and failure for each HDD**
- **Alternative HDD activity and failure signal source**

Host / Drive / Power Interfaces

- **Direct link SAS / SATA ports**
- **5 x SATA Signal + Power (7+15 pin) jacks at HDD side of backplane**
- **5 x SATA jacks (7 pin) at host side of backplane**
- **2 x DC power jacks (4-pin D-type)**

Monitoring Function

- **1 x Fan 3P3C jack with speed monitoring**
- **Fan monitoring can be disabled**
- **2 x temperature sensors for HDD overheating monitoring**
- **Overheat temperature is selectable：55℃ or 65℃**
- **Support one buzzer for audible alarm, three fail LED output for fan / overheat / HDD failure events, one alarm mute button for disabling audible alarm**
- **Alarm mute & LED outputs are connected through 2 x 7 pin header (pitch=2.54mm) with 1 key pin to the LED board**

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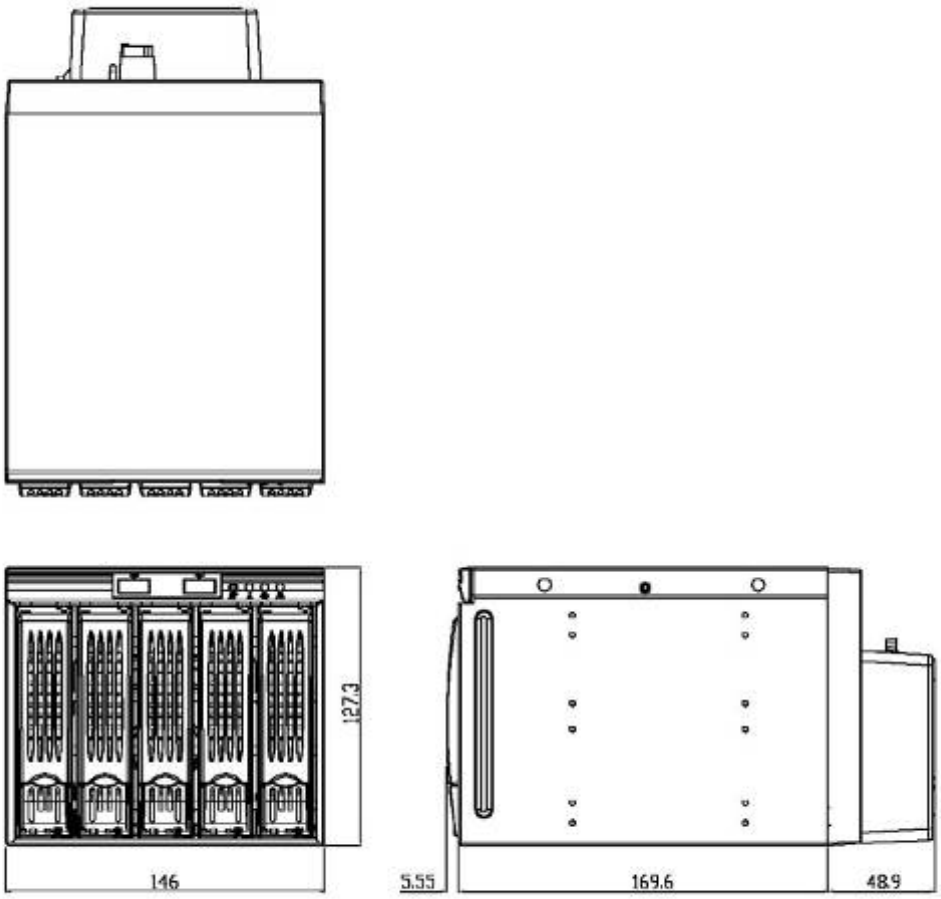
Mechanical Dimension



unit: mm

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Components Description

Front View

	Device	Function
1	USB jack	Front USB Extender
2	Alarm mute button	Click to stop the system failure alarm
3	Overheat Warning LED	Red LED On - Temperature overheat
4	Fan failure LED	Red LED On - Fan failure
5	HDD failure LED	Red LED On - HDD failure
6	3.5" HDD Hot-swap Tray	Refer to Page 14
7	HDD activity / failure LED	Green LED On - HDD active Red LED On - HDD failure
8	HDD Power LED	Blue LED On - HDD Power On

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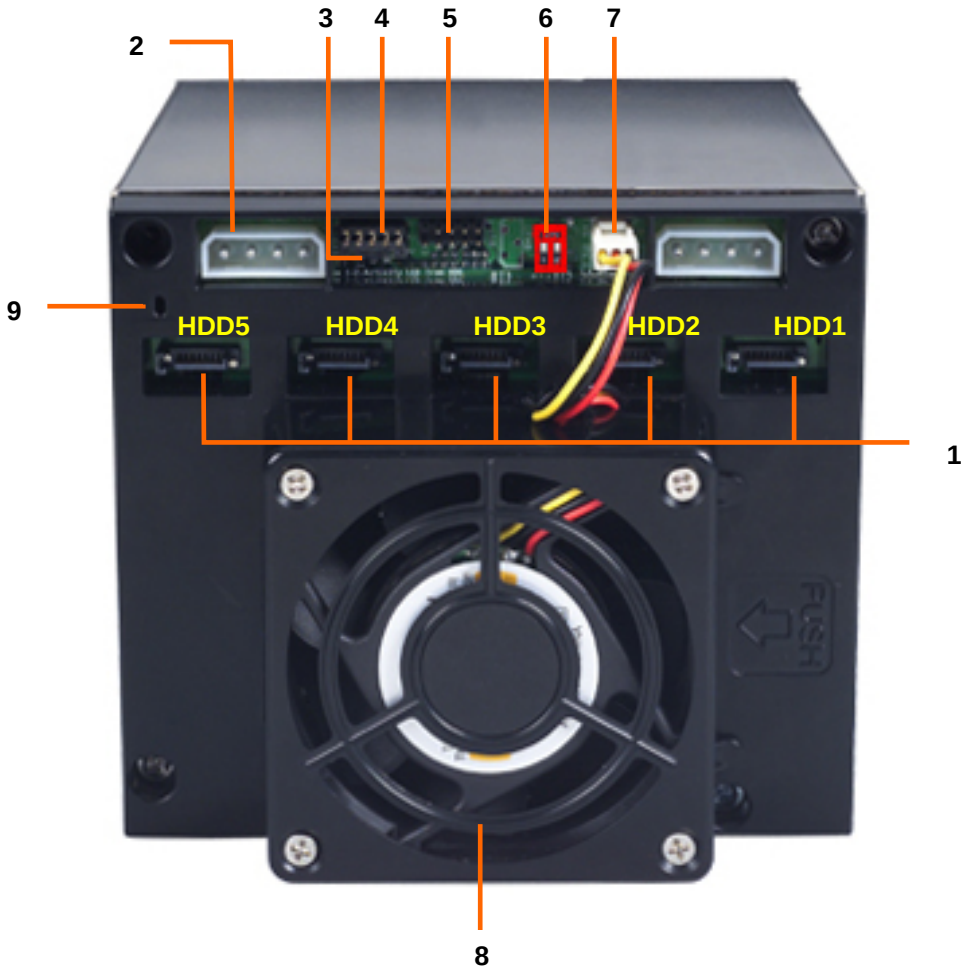
Rear View



	Devices	Function
1	SATA / SAS HDD jacks	Connect to motherboard / RAID card
2	Power jacks	4P jack for power input
3	HDD failure signal pin header	Refer to Page 11
4	HDD activity signal jumper	Refer to Page 12
5	USB jack	USB interface between front bezel & motherboard
6	Fan & Temperature switch	Refer to Page 13
7	Fan jack	3-pin power jack connect to 80mm fan
8	80mm fan	Air mover for SK33502 storage kit
9	Buzzer	System failure alarm

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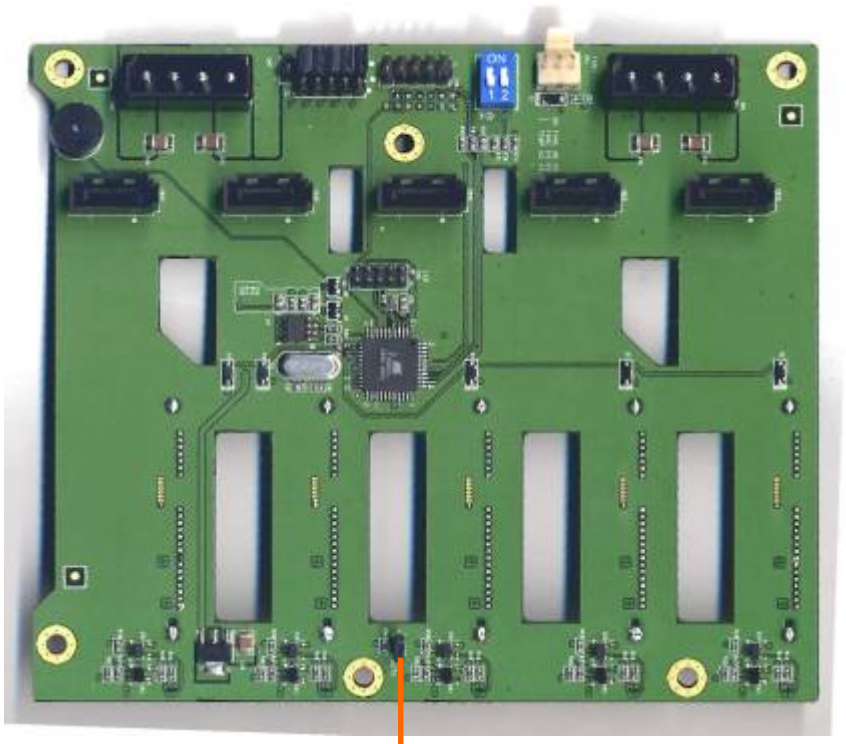
Rear View – Cover Removed



Device	Function
[CN8] SATA or SAS HDD access LED signal auto selection	Refer to Page 13

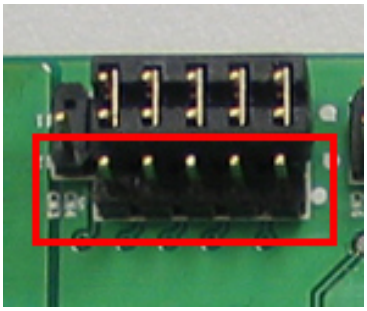
	Refer to page 16 for rear fan cover removal.

Connector & Switch Definition

HDD Failure Signal Pin Header

This pin header is for the SATA RAID card with HDD failure signal support such as ARECA ARC-1230 & 1260.

Connect the failure signal pin header on SK33502 backplane and RAID card to activate the HDD failure LED.



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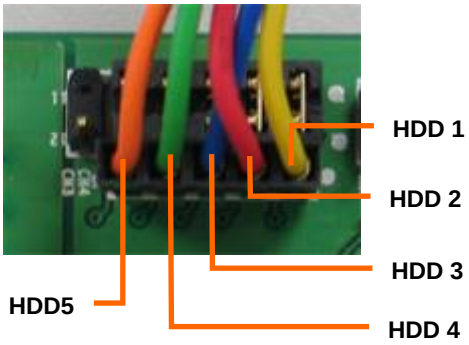
Setting for HDD Failure Signal Cable Connection (SK33502 Backplane)



Setting for HDD Failure Signal Cable Connection (RAID Card)

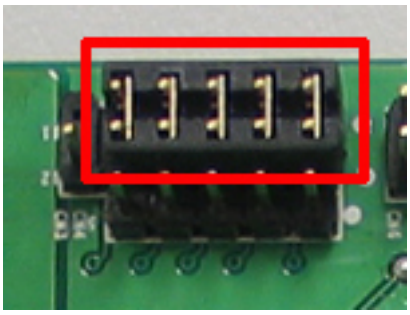
Connect the 4-pin HDD LED cable to the CATHODE of the HDD failure pin header on RAID card. Refer to your RAID card's user manual for the detailed pin definition.

HDD Activity Signal Jumper

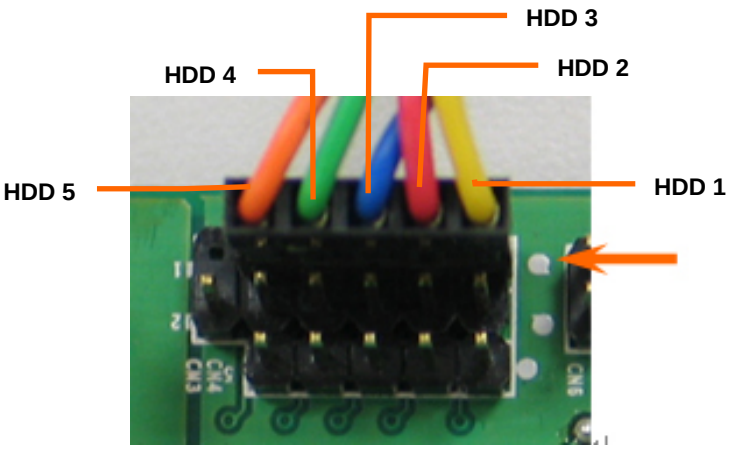
The default jumpers are installed for SATA-II (3.0 Gb/s) HDDs which support activity signal via pin-11 of the jack on HDD.

If using SATA-I (1.5 Gb/s) HDD, remove the jumper and connect the pin headers on SK33502 backplane and RAID card to activate the HDD activity LED. The RAID card must support the HDD activity signal such as 3ware 8000 & 9000 series.

Default setting for SATA-II HDD (with Jumper Cap)



Setting for SATA-I HDD (SK33502 Backplane)



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Setting for SATA-I HDD (RAID Card)

Connect the 5-pin HDD LED cable to the CATHODE of the HDD activity pin header on RAID card. Refer to your RAID card's user manual for the detailed pin definition.

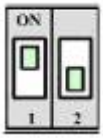
Fan & Temperature Switch

DIP 1：Fan Enable / Disable

1	Fan Enable / Disable
ON	Enable
OFF	Disable

DIP 2：Threshold Temperature Setting

2	Threshold Temperature
ON	65 ℃
OFF	55 ℃

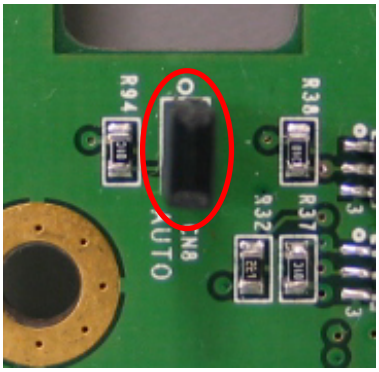


SW1 Default Setting

SATA or SAS HDD access LED signal auto selection

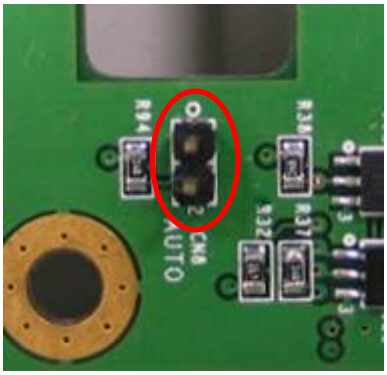
This Jumper (CN8) is located behind the rear fan cover. Refer to page 16 for cover removal.

Jumper Closed: Enable auto selection



Default setting

Jumper Opened: Disable auto selection. HDD access LED setting for SATA HDD only.



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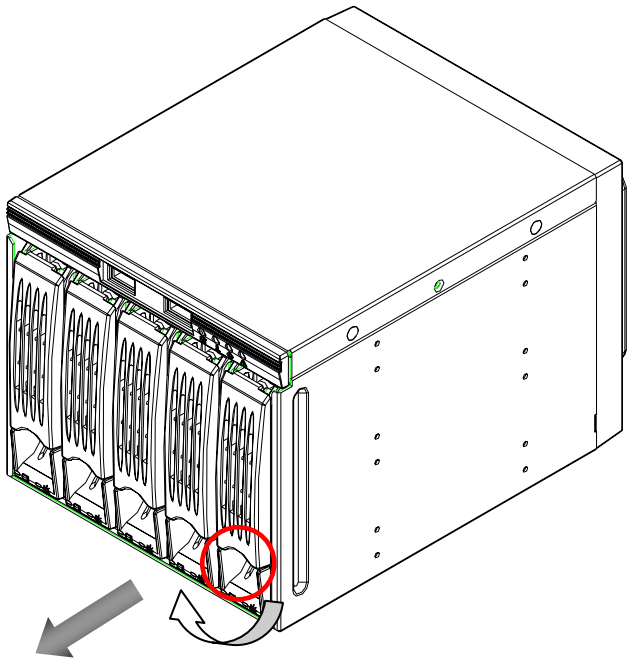
Installation Procedures

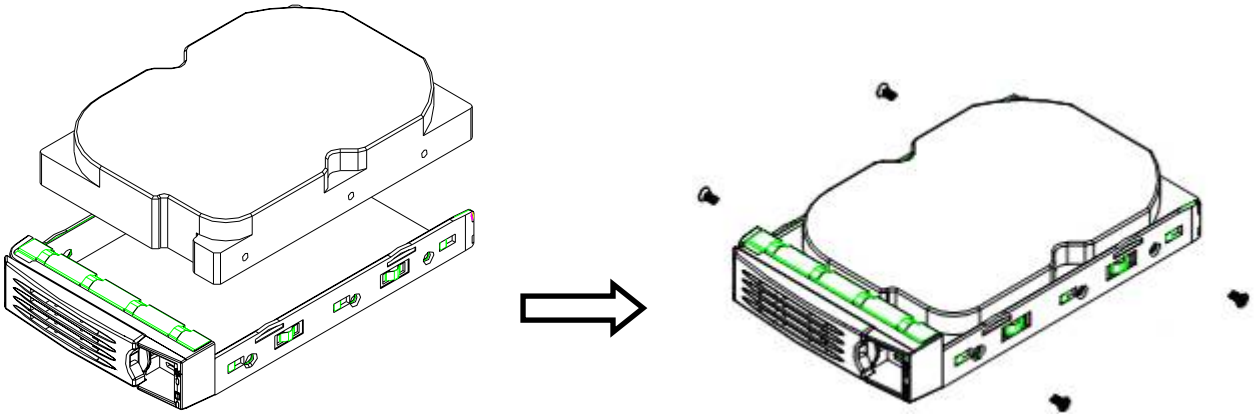
The following is the installation procedures for HDD and rear cover assembly.

Hot-swap HDD Assembly

a. Push the blue latch on HDD tray and pull it out from the cage



b. Attach HDD with four screws per tray



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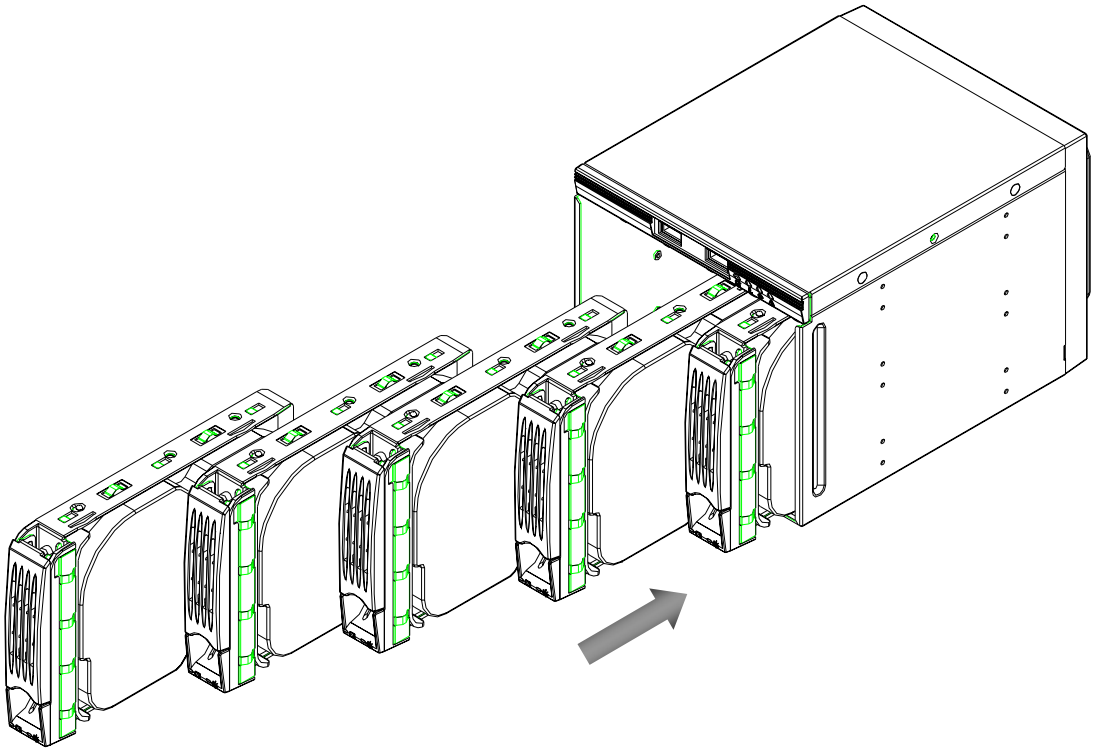
c. Insert HDD tray to the cage



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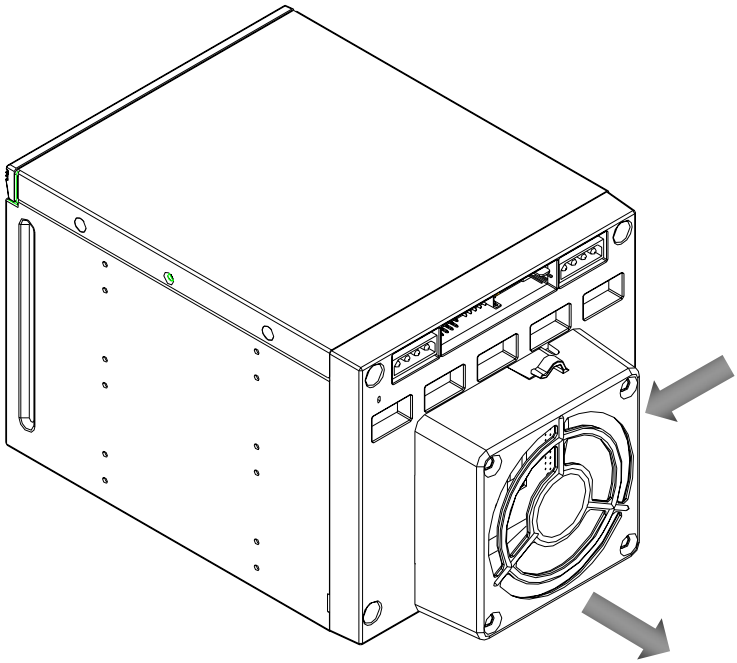
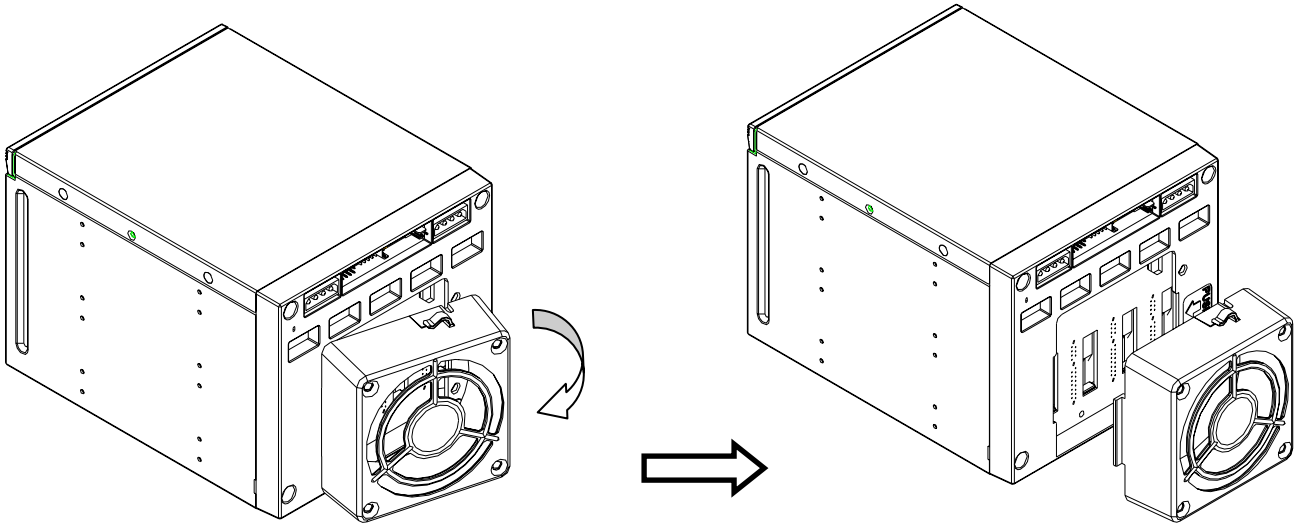
Accessing the Exhaust Fan

a. Unplug the fan power connector

b. Push the tab on the right side (where have "PUSH" mark on the rear cover)



c. Pull out the fan holder



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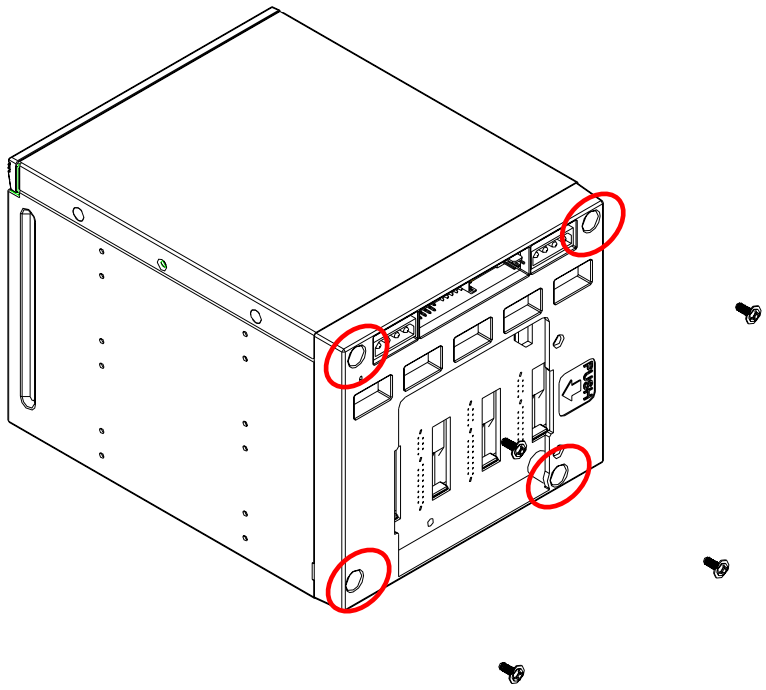
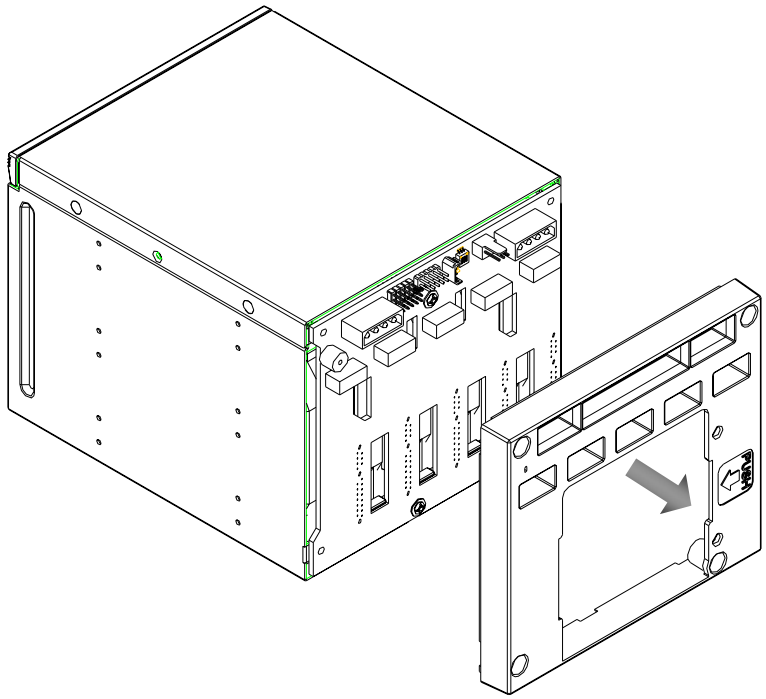
Accessing backplane assembly

a. After removing the rear exhaust fan, unscrew four screws to remove the rear cover





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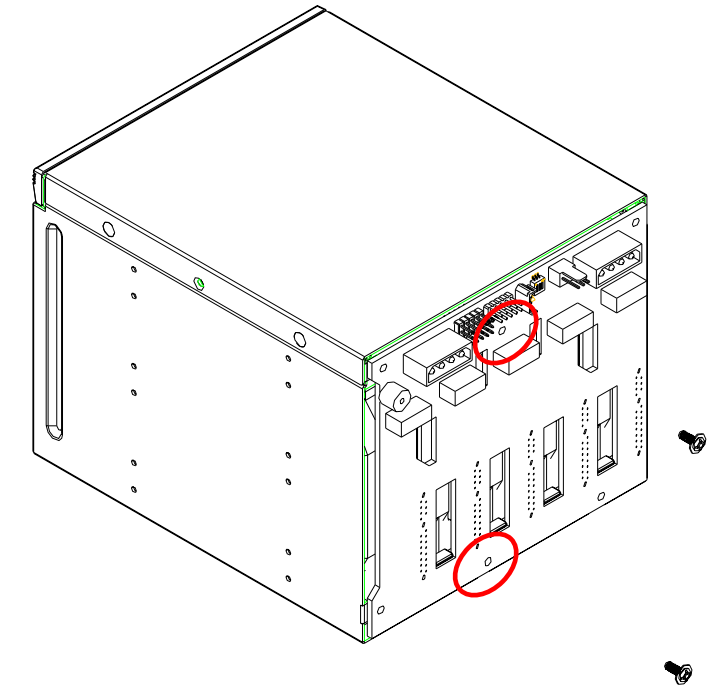
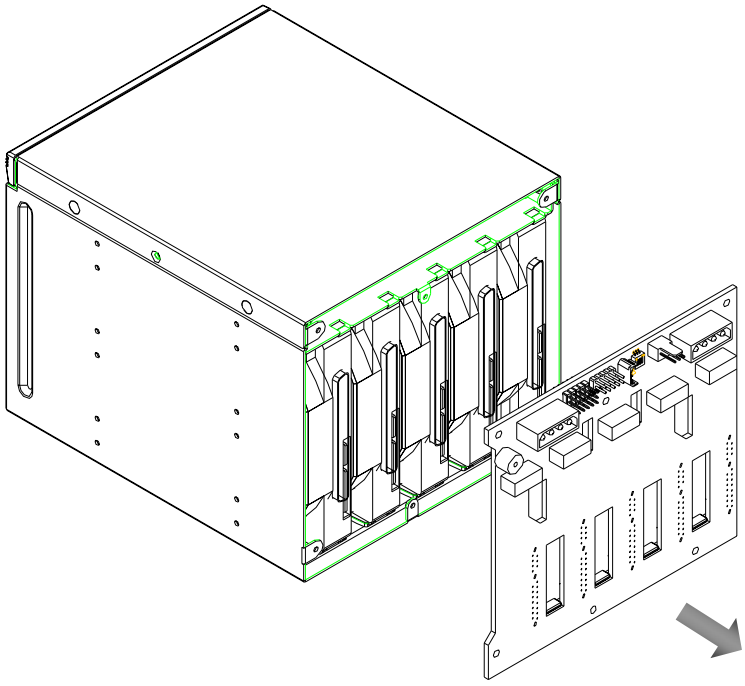
b. Remove two screws on the backplane





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Relative Part Number List

CHENBRO Part Number	Description	Unit	Remark
80H035335-001	SK33502 LED Board	pcs	
80H105335-003	SK33502 5-Port SATA /SAS Backplane	pcs	
26H123215-002	Serial ATA Cable, 700mm	pcs	
26H115335-001	HDD failure / activity signal Cable, 5P to 5P, 600mm	pcs	
30H080032-102	80mm (Thickness 32mm), Ball Bearing Fan	pcs	
83H555335-016	Hot-swap HDD Tray	pcs	

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